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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/923,079	08/06/2001	Yasukiyo Kunimatsu	0941.65732	1489

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EXAMINER

BATTAGLIA, MICHAEL V

ART UNIT	PAPER NUMBER
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2652

DATE MAILED: 12/24/2003

4

Please find below and/or attached an Office communication concerning this application or proceeding.

TS

Office Action Summary

Application No.

09/923,079

Applicant(s)

KUNIMATSU, YASUKIYO

Examiner

Michael V Battaglia

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) 10 and 11 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 8/6/2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 9.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Objections

2. Claim 11 is objected to because of the following informality: On line 3 of claim 11, the examiner suggests removing "the" because there is no antecedent basis for "the control data". Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 10 does not distinctly claim the subject matter which applicant regards as the invention because a limitation is added to the reproducing optical system, which is not positively claimed as part of the optical storage apparatus. The examiner will interpret the claim as meaning that another phase plate is fixed within the optical storage apparatus.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-9 and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamashita et al. (hereafter Yamashita) (US 6,392,972).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

In regard to claim 1, Yamashita discloses a phase compensation method which uses a phase plate to compensate for an optical phase of a reproduced signal in a reproducing optical system which is provided with respect to the reproduced signal from an optical recording medium, comprising the step of: controlling a position of the phase plate within a predetermined variable range depending on a type of the optical recording medium (Fig. 3 and Fig. 10, element 41), so

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that a carrier-to-noise ratio of a reproduced signal from a track which is being reproduced becomes a maximum or, a DC fluctuation of the reproduced signal becomes a minimum or, a crosstalk level from tracks adjacent to the track which is being reproduced becomes a minimum (Col. 3, lines 22-28).

In regard to claim 2, Yamashita discloses a phase compensation method which uses a phase plate to compensate for an optical phase of a reproduced signal in a reproducing optical system which is provided with respect to the reproduced signal from an optical recording medium, comprising the steps of: (a) detecting a position of the phase plate where a carrier-to-noise ratio of a reproduced signal from a track which is being reproduced becomes a maximum or, a DC fluctuation of the reproduced signal becomes a minimum or, a crosstalk level from tracks adjacent to the track which is being reproduced becomes a minimum (Col. 3, lines 22-28 and Col. 6, lines 27-40 and 56-59); (b) storing control data related to the position of the phase plate depending on a type of the optical recording medium (Col. 3, lines 57-59); and (c) controlling the position of the phase plate within a predetermined variable range based on the control data (Col. 10, lines 26-34).

In regard to claim 3, Yamashita discloses phase compensation method as claimed in claim 2, further comprising the step of: (d) recognizing the type of the optical recording medium (Fig. 3, element S1 and Col. 3, line 60).

In regard to claim 4, Yamashita discloses the phase compensation method as claimed in claim 3, further comprising the step of: (e) obtaining the control data at a time of loading the optical recording medium (Col. 3, lines 60-61).

In regard to claim 5, Yamashita discloses the phase compensation method as claimed in claim 2, further comprising the step of: (d) obtaining the control data at a time of loading the optical recording medium (Col. 3, lines 60-61).

In regard to claim 6, Yamashita discloses an optical storage apparatus comprising: a phase plate which compensates for an optical phase of a reproduced signal in a reproducing optical system which is provided with respect to the reproduced signal from an optical recording medium (Fig. 10, element 41); a detector which detects a position of the phase plate (Col. 8, lines 36-45); a varying unit which varies the position of the phase plate (Fig. 10, element 64); and a control unit which controls the position of the phase plate within a predetermined variable range depending on a type of the optical recording medium (Fig. 3, element S1 and Fig. 10, element 66), so that a carrier-to-noise ratio of a reproduced signal from a track which is being reproduced becomes a maximum or, a DC fluctuation of the reproduced signal becomes a minimum or, a crosstalk level from tracks adjacent to the track which is being reproduced becomes a minimum (Col. 3, lines 22-28).

In regard to claim 7, Yamashita discloses a memory which stores control data related to the position of the phase plate where the carrier-to-noise ratio of the reproduced signal from the track which is being reproduced becomes the maximum or, the DC fluctuation of the reproduced signal becomes the minimum or, the crosstalk level from the tracks adjacent to the track which is being reproduced becomes the minimum, said control unit controlling the varying unit based on the control data stored in the memory (Fig. 3, element S3 and Fig. 4, element 26a).

In regard to claim 8, Yamashita discloses that said memory stores control data within one track or, within a plurality of tracks or, within one zone of the optical recording medium (Col. 6, lines 34-45 and Col. 7, line 63-Col. 8, line 1).

In regard to claim 9, Yamashita discloses a recognizing unit which recognizes the type of the optical recording medium (Col. 6, lines 53-59).

In regard to claim 11, Yamashita discloses a means for obtaining the control data when loading the optical recording medium into the optical storage apparatus (Col. 6, lines 53-59).

Allowable Subject Matter

5. Claim 10 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. None of the references of record alone or in combination disclose or suggest an optical storage apparatus comprising: a **phase plate** which compensates for an optical phase of a reproduced signal in a reproducing optical; a **detector** which detects a position of the phase plate; a control unit which controls the position of the phase plate within a **predetermined variable range depending on a type of the optical recording medium**, so that a carrier-to-noise ratio of a reproduced signal from a track which is being reproduced becomes a maximum or, a DC fluctuation of the reproduced signal becomes a minimum or, a crosstalk level from tracks adjacent to the track which is being reproduced becomes a minimum; and **another phase plate which is fixed within the reproducing optical system**.

Citation of Relevant Prior Art

6. Emoto et al. (US 5,070,494) discloses rotating a phase plate depending on the disc type to reduce noise created by luminous quantity (light power) fluctuations and discloses using a second phase plate. Nishimoto (US 6,442,123) discloses controlling the position of a phase plate within a predetermined variable range depending on the disk type to improve carrier-to-noise ratio. Hajjar (US 6,111,840) suggests using two or more phase compensation elements and discloses a dynamically adjustable phase compensating element that will compensate for phase distortion

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variations present in a reflected beam due to variations in operating conditions or different optical media (Col. 10, line 63-Col. 11, line 2). Hajjar further discloses storing a set of predetermined phase compensation profiles and using them adjust a phase compensation element as needed. Iwasaki et al. (US 5,949,748) discloses adjusting the tilt of a liquid crystal panel that acts as a wave plate by a predetermined angle depending on the optical recording medium type (Fig. 1). Kase et al discloses tilting a phase plate to change the length of the optical path through the phase plate and vary the phase difference produced and using a detector to find where the phase is matched.

Conclusion

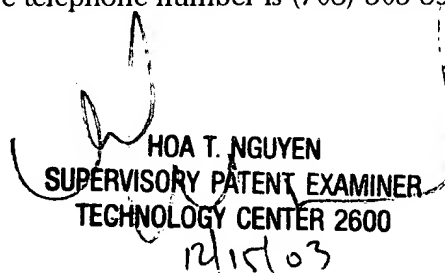
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael V Battaglia whose telephone number is (703) 305-4534. The examiner can normally be reached on 5-4/9 Plan with 1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.



Michael Battaglia



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